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A.D. 1884, 10th JULY. N° 10,010.

Improvements in the Manufacture of Bread, Biscuits, and other Articles Prepared from Meal or Flour.

PROVISIONAL SPECIFICATION.

I HERBERT WILLIAM HART, of 337 Strand in the County of Middlesex Professor of Dietetic Pathology do hereby declare the nature of my Invention for "IMPROVEMENTS IN THE MANUFACTURE OF BREAD, BISCUITS, AND OTHER ARTICLES PREPARED FROM MEAL OR FLOUR," to be as follows:—

My invention relates to improvements in the manufacture of bread, biscuits and other articles prepared from meal or flour.

According to the ordinary system of making whole meal bread and other analogous articles the following disadvantages exist. (1.) The wheat is imperfectly cleansed by the apparatus employed for that purpose reliance being placed upon the bolting cloth removing any Foreign matter from the flour in consequence of which the meal used in the manufacture of meal bread is not so clean as it should be, besides being inferior in quality owing to the admixture of inferior wheats (not passed through the bolting cloth) to cheapen the quality of ordinary flour.— (2.) The wheat when converted into meal is so finely ground as to cut the bran into small particles which not only renders the bran comparatively useless for digestive purposes, but at the same time has a deteriorating effect upon the meal produced therefrom. (3) The ordinary meal bread either undergoes a process of fermentation which decomposes and deteriorates the meal, causing acidity in the stomach or it is made by an unfermented process wherein inferior chemicals are generally employed which besides deteriorating the quality of the meal renders it tasteless and have an injurious effect upon the digestive organs. (4) In baking the bread in thick loaves as at present it requires a long time to evaporate the moisture a thick hard crust being thereby formed, which is very objectionable and causes waste.

In carrying out my invention by which these objections are entirely obviated and a superior bread produced, I first thoroughly cleanse the wheat by any suitable and well known method and apparatus so as to ensure the complete removal therefrom of any Foreign matter—I then pulverize the wheat by any suitable means for preserving the integrity of the bran as much as possible so that when made into bread or other articles the bran will by its coarseness ensure thorough mastication and digestion and after digestion the nutritious properties being removed from the bran, the woody fibre of the latter will ensure the normal peristallic action of the bowels by a due irritation of the mucous membrane.

[*Price 4d.*]

Hart's Improvements in the Manufacture of Bread, Biscuits, &c.

For preserving the natural sweetness and flavour of the wheat whether for making bread or pastry it should be pulverized only as required for immediate use and for the purpose of making it into bread, the meal should be soaked with the necessary quantity of liquid and a sufficient time allowed to elapse for the soluble phosphates to exude from the bran into the flour or starchy particles—The material is then placed in tins or moulds specially designed for imparting a flat shape to the bread.—In baking the bread I prefer to use porous pans or moulds made of hard clay into which the dough is placed whereby the moisture from the latter is more rapidly absorbed, the baking more quickly effected and a thinner crust ensured.

By my invention not only is a sweeter and more palatable whole meal bread produced but also the great objections to meal breads as at present made including the thick crust and consequent waste are obviated.

Dated this 10th day of July 1884.

EDWARD W. FURRELL & BROTHER,
Agents,
Bank Buildings, 124, Chancery Lane, E.C.

Improvements in the Manufacture of Bread, Biscuits, and other Articles Prepared from Meal or Flour.

COMPLETE SPECIFICATION.

I HERBERT WILLIAM HART of 337 Strand in the County of Middlesex Professor of dietetic Pathology, do hereby declare the nature of my invention for "IMPROVEMENTS IN THE MANUFACTURE OF BREAD, BISCUITS AND OTHER ARTICLES PREPARED FROM MEAL OR FLOUR" and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

My invention relates to improvements in the manufacture of bread, biscuits and other articles prepared from meal or flour.

According to the ordinary system of making whole meal bread and other analogous articles the following disadvantages exist.

1. The wheat is imperfectly cleansed by the apparatus employed for that purpose too much reliance being placed upon the removal by the bolting cloth of any Foreign matter from the flour in consequence of which the meal used in the manufacture of meal bread is not so clean as it should be, besides being of inferior quality owing to the admixture of inferior wheats which (not having passed through the bolting cloth) are used to cheapen ordinary flour.

2. The wheat when converted into meal is so finely ground as to cut the bran into small particles which not only renders the bran comparatively useless for digestive purposes, but at the same time has a deteriorating effect upon the meal produced therefrom.

3. The ordinary meal bread either undergoes a process of fermentation which decomposes and deteriorates the meal, causing acidity in the stomach or when made by an unfermented process inferior chemicals (in which arsenic enters) are generally employed which besides deteriorating the quality of the meal renders it tasteless and causes it to act injuriously upon the digestive organs.

4. Under the present system of making whole meal bread in large thick loaves a considerable time is required to evaporate the moisture (which exceeds that in white bread) and the loaves being generally baked in ovens the temperature of which has been lowered by their being previously used for baking white bread, the consequence is that the heat is insufficient to penetrate to the middle of the whole meal loaves, so that before being thoroughly baked a thick hard crust is formed, which is very objectionable during the process of mastication and causes great waste.

In carrying out my invention whereby the above objections are entirely obviated and a superior bread produced, I first thoroughly cleanse the wheat by washing, and then thoroughly examine it so as to ensure the complete removal therefrom of any Foreign matter—I then pulverize or crush (not grind) the cleansed wheat by any suitable means for preserving the integrity of the bran as much as possible so that when made into bread or other articles the bran will by its coarseness ensure thorough mastication and digestion and after digestion the nutritious properties being removed from the bran, the woody fibre of the latter will ensure the normal peristallic action of the bowels by a due irritation of the mucous membrane.

For preserving the natural sweetness and flavour of the wheat whether for making pastry or bread, I prefer to pulverize it only as required for immediate use, and for making it into bread the meal should be soaked with the necessary quantity of liquid and sufficient time allowed to elapse for the soluble phosphates to exude from the bran into the flour or starchy particles—The material is then placed in tins or moulds for imparting a flat shape to the bread.

In baking the bread, I prefer to place it on wire frames of a fine or suitable mesh, which ensures a more uniform distribution of heat over the surface of the loaves.

By my invention not only is a sweeter and more palatable whole meal bread produced, but also the great objection to meal breads as at present made including the thick crust and consequent waste are obviated.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is

The combined process of washing and pulverizing (not grinding) the wheat and making whole meal bread substantially as and for the purposes hereinbefore described.

Dated this 7th day of March 1885.

EDWARD W. FURRELL (M. Inst. M.E.) & BRO.,
Agents,
Bank Buildings, 124, Chancery Lane.

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